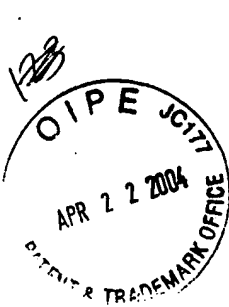


AF/3711



MS APPEAL BRIEF - PATENTS  
PATENT  
0229-0532P

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of                      Before the Board of Appeals  
Masahide ONUKI et al                      Appeal No.:  
  
Appl. No.:              09/194,112                      Group:              3711  
Filed:                      November 23, 1998                      Examiner: BLAU, S.L.  
Conf.:                      2812  
For:                      GOLF CLUB HEAD

REPLY BRIEF TRANSMITTAL FORM

MS APPEAL BRIEF - PATENTS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 22, 2004

Sir:

Transmitted herewith is a Reply Brief (in triplicate) on behalf of the appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

The Examiner's Answer was mailed on February 23, 2004.

☐ An extension of time under 37 C.F.R. § 1.136(b) to                      was requested on                      and was approved on                      .

☐ Please charge Deposit Account No. 02-2448 in the amount of \$0.00. A triplicate copy of this sheet is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By



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Attachment(s)

(Rev. 02/12/2004)



MS APPEAL BRIEF  
PATENT  
0229-0532P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Masahide ONUKI et al. Conf.: 2812  
Appl. No.: 09/194,112 Group: 3711  
Filed: November 23, 1998 Examiner: BLAU, S.L.  
For: GOLF CLUB HEAD

**REPLY BRIEF UNDER 37 C.F.R. § 1.193**

**MS APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 22, 2004

Sir:

In response to the Examiner's Answer of February 23, 2004, the following Reply Brief is submitted in connection with the above-identified application.

**Remarks to rebut the Examiner's assertions**

Appellants respectfully point out that the Examiner has incorrectly stated the tensile strength regarding the alloy tested from the Peker '642 (US Patent No. 5,896,642) reference. The Examiner asserts that the tensile strength disclosed in

Peker '642 is 164 kg/mm<sup>2</sup> for the alloy composition that was tested by Appellants. Please see page 12, line 6, and page 14, lines 6, 8, and 12 of the Examiner's Answer sent February 23, 2004. This figure as reported by the Examiner is incorrect. As was reported in the Appeal Brief in, for example, the Table in the middle of page 8, and also in Appendix B (see claim 21), the tensile strength should be 194 kg/mm<sup>2</sup>. This mistake is relevant because the claimed tensile strength range is from 105 to 175 kg/mm<sup>2</sup> in, for example, claim 21. The Examiner's mistake (i.e., a tensile strength value of 164 kg/mm<sup>2</sup>) would fall within the scope of this element of the claim whereas the actual value (i.e., a tensile strength value of 194 kg/mm<sup>2</sup>) falls outside the scope of this element of the claim.

Please note that the advantages of the tensile strength in the claimed range are disclosed in page 6, line 19 et seq. of the written description. In particular, the tensile strength must be sufficient so as to be durable to the shock on impact of the ball. A tensile strength in the claimed range allows an increase in golf ball carry (in accordance with an impedance matching theory) and allows a soft feel when hitting the ball by reducing the shock upon impact.

Moreover, as was pointed out in the Reply Brief, the tensile strength value is not just dependent upon the composition of the alloy but is also dependent upon the method

employed in making the final alloy product. Please see page 10, lines 16 et seq. of the Reply Brief filed November 7, 2003. In this passage the tensile strength of the final alloy product is also dependent upon the method of annealing and forging the metals (and not just on the composition). Thus, even if Peker '642 were to disclose a generic composition genus that overlaps Appellants' composition, one cannot arrive at the tensile strength without an appropriate teaching of the means by which the final alloy composition is made. Accordingly, in the absence of a teaching of a preferred tensile strength range, as for example, in claim 21 (which Peker '642 does not disclose), one cannot arrive at the instant invention by the disclosure of Peker '642.

Regarding tensile strength, at page 10, lines 14-15 the Examiner states:

*Clearly the face of Peker will have inherent properties as Young's modulus, tensile strength and hardness.*

This statement is inaccurate. As was explained above, tensile strength cannot be considered an inherent property. One cannot state exactly what the tensile strength will be based solely on the composition of the metal. The tensile strength is also determined by the method of forging and annealing as was described above. Without a disclosure of a tensile strength which falls within the claimed invention (which Peker '642 does

not disclose) or a disclosure of how one can modify annealing and forging an alloy to arrive at a given tensile strength, one would not be able to obtain that given tensile strength without either of these teachings. Peker '642 discloses neither. Thus, Peker '642 cannot render *prima facie* obvious the instant invention.

Likewise, the hardness (Vickers hardness) is not an inherent property that is solely dependent on the composition of alloy<sup>1</sup>. The Vickers hardness is calculated by dividing a load placed on a metal by the surface area of an impression that that load generates. The surface area of the impression is dependent on the structure of the alloy composition, which is in turn dependent on how the alloy was manufactured. Please see the Appeal Brief at page 17, lines 3 et seq. Thus, simply by disclosing a particular alloy composition, one cannot arrive at a given Vickers hardness without some teaching of the Vickers hardness itself or how that alloy was manufactured. Appellants pointed out in the Appeal Brief that neither Peker '642 nor Kobayashi '742 disclosed a Vickers hardness nor disclosed a method for how to arrive at a given Vickers hardness as, for example, claimed in claim 5. (See, for example, the last row of the Table on page 14 in the Appeal Brief). Thus, Appellants

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<sup>1</sup>*It is respectfully pointed out that Vickers hardness is claimed in claim 5 and is rejected over a combination of Peker '642 and Kobayashi '742 (US Patent No. 5, 611,742).*

submit that a proper *prima facie* obviousness rejection was not made.

Appellants also respectfully point out that the Examiner has misconstrued Appellants arguments, for example, at points 8 and 9 on page 14 of the Examiner's Answer.

The Examiner states:

8. It is improper to combine the references of Peker and Kobayashi (742) since hardness is not an inherent property but depends on the surface area of an impression that load generates, which depends [SIC, depends] on the composition, and which independents [SIC, is dependent] on how an alloy is manufactured.
9. It is improper to combine the references of Peker and Kobayashi (742) since neither disclose the Young's modulus as defined by the claims.

Appellants never argued that it was improper to combine the references. Appellants argued that when the two references (i.e., Peker '642 and Kobayashi '742) are combined, they fail to render *prima facie* obvious the instant invention. Please see page 17, line 18 of the Appeal Brief. This is because Peker '642 and Kobayashi '742 neither disclose nor suggest the claimed hardness or the claimed Young's modulus.

Appellants also take exception to the Examiner's citation of prior art references that appears in the last paragraph of page 3 of the Examiner's answer. The Examiner states:

*The following is the prior art not relied on but cited as to develop what is known in the art by one skilled in the art at the time of the invention. The examiner used these findings to conclude the meaning of prior art references relied on to persons of ordinary skill*

*in the art and the motivation those references would provide to such persons (In re Berg, 65 USPQ2d (Fed. Cir. 2003)).*

After the paragraph, the Examiner cites 8 references that have not been previously cited by the Examiner. Appellants, thus suggest, that if these references are to be used for the meaning of prior art references and the motivation that these references would provide a person of ordinary skill in the art, that all of the teachings be used, for example, the teaching in the first cited reference Aizawa '103 (US Patent No. 5,643,103) at column 4, lines 1-13 wherein it is stated:

*As described above, the face plates 17 to 19 of the clubs are thicker as the club numbers decrease, viz., in the order of the short iron clubs to the middle and the long iron clubs. When the face plate 17 (18, 19) is made of titanium, for example, the face plate 19 of the short iron club shown in FIG. 4 has a thickness of 4.0 mm, equal to that of the conventional face plate. The face plate 18 shown in FIG. 3 has a thickness of 4.25 mm, and the face plate 17 shown in FIG. 2 has a thickness of 4.5 mm. When the face plate 17 (18, 19) is made of aluminum, the face plate 19 shown in FIG. 4 has a thickness of 4.0 mm. The face plate 18 shown in FIG. 3 has a thickness of 5.0 mm, and the face plate 17 shown in FIG. 2 has a thickness of 6.0 mm.*

In the above paragraph, Aizawa '103 discloses a face plate thickness of from 4.0 mm to 6.0 mm. Please note that claim 20 of the instant invention claims a face plate thickness of from 1 mm to 3 mm. Please note that this disclosed range has no overlap with the claimed range. Thus, if any teaching of these



references is to be used, Appellants respectfully request that their teachings as a whole be considered.

Finally, Appellants, respectfully submit that Appendix D that is referred to in the Appeal Brief on page 11, line 11 was submitted with the Appeal Brief but was not labeled at the top. Accordingly, Appellants herein, resubmit Appendix D with the designation indicated at the top of the document.

### Conclusion

For the reasons advanced above as well as for the reasons that were enumerated in the Appeal Brief filed November 7, 2003, Appellants assert that the claims, as currently pending, are patentable over any of Peker '642, Kobayashi '742, Anderson '663 (US Patent No. 5,261,663) and Sieleman '005 (US Patent No. 5,792,005), either separately or in combination. Appellants assert that the Examiner's rejections are inapposite. Reversal of the Examiner's rejections under 35 USC §103 by the Honorable Board is warranted and respectfully requested.

With the above remarks, it is believed that the claims, as they now stand, define patentable subject matter and urge reversal of the Examiner's rejections and issue of said claims in a U.S. Patent.


If any questions remain regarding the above matters, please contact Appellants' representative, T. Benjamin Schroeder (Reg. No. 50,990), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

  
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Attachment: Appendix D

# APPENDIX D

## Table 2

Alloys composition of Peker

composition	Zr	Ti	Be	Ni	Cu	Fe	Co	Mn	Hf	Al	Mo	Cr
type-a	41.2	13.8	22.5		10	12.5						
type-b	46.75	8.25	27.5		10	7.5						
type-c	25~85					5~70			5~35			
type-d	60				25						15	

Alloys composition of the embodiment of this present invention

composition	Zr	Ti	Be	Ni	Cu	Fe	Co	Mn	Hf	Al	Mo	Cr
ex.1	54				5	30				1	10	
ex.2,11	64				10	15				1	10	
ex.3,4,6,9,12	55				5	30					10	
ex.5	50				10	20					10	
ex.7,10	55				10	25					10	
ex.8	54				10	15				1	10	